

Fig. 1

```
Majority - N - -
      EBP1.SEO
EBP2.SEQ
RBP3.SEQ
EBP4.SEQ
            --- MKGKMNMCLFFFYSILYVVLCTYVLGIS-EEY-L 100
BBP5 SEQ N N -
Majority KEXXKGLDVYX-N-N--NNN---N--
EBP1.SEQ KENEKFLDVYKEKFNELDKKKYGNVQKTDKKIFTFIENKL
                                                                 N K L 199
       QDESS--DISRVNSPELNNNHKTNIYDSD-
-EKNKFIDTYS-----
                                                                      223
EBP3.SEO
                                                                      97
EBP4.SEQ - - - - G L - - - - - 10
EBP5.SEQ KERPQGLNVETNNNN - - NNNNNNNNNNSNSNDAMSFV - - NEV 205
Majority
EBP1.SEQ - DILNNSKFNKRWKSYGTPDNIDKNMSLJINKHNN--EBMF 310
EBP2. SEQ INSFVENKSVKKKRSLSFINNKTKSYDTIPPSYSYRNDKF 343
Majority N - - - S - L - I S X Y G - - N - Y - N - N -
                                    140
EBP1.SEQ NNNYQSFLSTSSLIKQNKYVPINAVRVSR--
                                                               L D S R 421
- - IK IY G - - -
EBP4.SEQ
         - - V SSFLNIK KY GR K G BYLNRN- - - - - S F V OR S 376
Majority
                             -- CGXKRKXIKWICXXNXXKSNNVCI
                     170
                                    180
      I N N G R N T S S N N E V L S N C R E K R K G M K W D C K K K N D R S N Y V C I 541

T H - - - - - - - - L F A C G I K R K S I K W I C R E N S E K I T - V C V 544

- - - - - - - - - L Y E C G K K I K E M K W I C T D N Q F K S N N L C A 178

Y I R G - - - - - - - - - - - - C K G K R S T H T W I C B N K G N - - N N I C I 454
EBP1.SEQ
EBP2.SEQ
EBP3.SEO
EBP4.SEQ
EBP1.SEQ P D R R I Q L C I V N L S I I K T Y T K E - - EBP2.SEQ P D R K I Q L C I A N F L N S R L E T M E - - -
                                                       TMKDHFIEA 631
       PDRKIQLCIANFLUSRLETME-------KFKEIFLIS
PIRRIQLCIVNIILFSENENBYIYKNDSINNKPKENILKA
EBP3.SEO
                                                                      298
EBP4.SEQ
EBP5.SEQ PDRRVQLCITALQDLKNSGSE----TTDRKLLRDKVFDS
Majority V K X E S X L L X N K N X N K Y N S K F C D D L K N S F L D Y G D I I I G X D L
                     250
                                                    270
                                                                   280
EBPS.SEQ AMYETDLLWNKYGFRGFDDFCDDVKNSYLDYKDVIFGTDL
```

```
Majority DFGGNSDXVEEXIKKXFKX-YX-
                                        290
                                                                                                  310
                                                                                                                                320
EBP1.SEQ D F G G Y S T K A E N K I Q E V F K G A H G - - - - - - - E I S E H K I K 841 EBP2.SEQ D F G G N T D R V K G Y I N K K F S D Y Y K - - - - - - - E K N V E K L N 844
                                                                                                            EISEHKIK 841
             I Y K N N T D Y I K E Q F K K I P N N E Y N N B L N D E L N N E L N D E K N
                                                                                                                                     538
                                                                                                                                      100
EBPS.SEQ DKNNISKLVBESLKRFFKK--DSSVLN---
                                                                                                                                      754
Majority N-RKEWWEKYKEXLWEXMIXEHKXNI---CKXIPXEEPQI
                                                                     340
                                                                                                   350
EBP1.SEQ N FR KKW WN E PREKL WEAML SEHKNN IN N - CKNI PQE ELQI
EBP2.SEQ NIKKEW WE KNKANL WN HMIV NHKGNISKE CAII PAEEPQI
                                                                                                                                     958
                                                                                                                                     964
             KLRKEWWEKYKED IWEEMTKEHNDKFIEKCKYFAKDEPQI 658
EBP3.SEQ
                                                                                                                                      100
EBP5.SEQ - - PTAWWRRYGTRLWKTMIQPYAHL - - - GCRKPDENEPQI 859
Majority NRWIKEWXK---XFLXEKXXLL---KXKCXENXKYEAC
                                        370
                                                                                                   390
EBP1.SEQ TQWIKEWHG---EFLLERDNRSKLPKSKCKNNTLYEACEK 1069
EBP2.SEQ NLWIKEWNE---NFLMEKKRLFLNIKDKCVENKKYEACFG 1075
EBP3.SEQ VRWIEEWSK---QFLDEKNYMLFTLRNTYNEMNIIHE--- 760
                                                                                                                                      100
EBP5.SEQ NRWILEWGKYNCRLMKEKEKLL---TGECSVNRKKSDCST 970
Majority GCXNECKKYRSWIXKSKXEWTILSNEY -
                                        410
                                                                     420
                                                                                                   430
EBP1.SEQ ECIDPCMKYRDWIIRSKFEWHTLSKEY
EBP2.SEQ GCRLPCSSYTSFMKKSKTQMEVLTNLY
                                                                                                                         ETQK
                                                                                                                                     1162
                                                                                                                      - KKKN 1168
EBP3.SEQ - - - MNCKQYNKWVQNRKKEWTPLSNEF - - - - - - - NKI - 841
EBP4.SEQ - CKSECKKYKAWIDKKNNDFTILSEIYLK - - - - YNKKS 199
EBP5.SEQ GC NNE CYTYRSLINRORYEVSILG KKYIKVVRYTIFRRKI 1090
Majority VPXDNAXNFLKXIFKEYKDNDVSXIFXNLNAEYXNKCDCQ
                                        450
                                                                                                   470
EBP1.SEQ V PK EN A EN Y L I K I S E N K N D A K V S L L L N N C D A E Y S K Y C D C K 1282 EBP2.SEQ S G V D K - N N F L N D L F K K N N K N D L D D F F K N - E K E Y D D L C D C R 1282 EBP3.SEQ F PE R N V Q I H I S N I F K E Y K E N N V D I I F G T L N Y E Y N N F C K E K 961 EBP4.SEQ S L Y K T A F E Y L K Q K W D K Y K E L N F S S I F D Q L N A K Y Y N K C I C Q 319 EBP5.SEQ V Q P D N A L D F L K L N C S E C K D I D F K P F F E F E Y G K Y E E K C M C Q 1210
Majority X T - I T L X K S F L K G N D I C S X N I X X X I X X X D L S - F G C K E K S -
                                        490
                                                                     500
                                                                                                   510
EBP1.SEQ HT - TTLVK K SVL NG N D N T I K E K R E H I D L D D F S K F G C D K N S V 1399
EBP2.SEQ Y T - A T I I K S F L N G P A K N D V D I A S Q I N V N D L R G F G C N Y K S - 1396
EBP3.SEQ P E L V S A A K Y N L K A P N A K S P R I Y K S K E H E E S V F G C K T K - I 1078
EBP4.SEQ N N K I E N N A L Y V K I E D I C N - N T K V K S I Y G E L - - Y - C K B K G - 424
EBP5.SEQ S Y - I D L K I Q F - K N N D I C S F N A Q T D T V S S D K R - F - C L E K K - 1315
Majority -- NXKXWNC-KXXFKXXXP-GVCGPPRRQQLCLGNL-YLL
                                        530
                                                                                                   550
EBP1.SEQ D T N T K V W E C - K K P Y K L S T K - D V C V P P R R Q E L C L G N I - D R I 1510
EBP2.SEQ - N N E K S W N C - T G T F T N K F P - G T C E P P R R Q T L C L G R T - Y L L 1504
EBP3.SEQ S K V K K K W N C - Y S N N K V T K P E G V C G P P R R Q Q L C L G Y I - F L I 1192
EBP4.SEQ - - N D K I W Q C I N E H I K D F P D - V C G P P R R Q Q L C L G N L D - - 523
EBP5.SEQ - - B F K P W K C D K N S F E T V H H K G V C V S P R R Q G F C L G N L N Y L L 1429
```

```
Majority XDG - - - - N L E X L K E H I L X A A I Y E G K L L K E K Y K N K
                                   570
                                                                                                                  600
EBP1.SEQ YDK - - - - NIL MIKEHILAIAIYESRILKRKYKNK
EBP2.SEQ HRG - - - - HEEDYKEHLLIGASIYEAQLLKYKYKEK
                                                                                                                      1600
                                                                                                                      1594
EBP3.SEQ RDG-----NBEGLKDHINKAANYBAMHLKEKYENA-----1282
EBP4.SEQ KDEFKNVNDLKKFLNEIILGIRDEGKFLIEKYRKNMHENM 643
EBP5.SEQ NDDIYNVHN-SQLLIEIIMASKQEGKLLWKK----HGTI 1531
                                                                                                                      1282
Majority - DDXXACKIINXSYADIKDIIXGXDXWNDXNSIKLBENLN
                                                             620
                                                                                       630
EBP1.SEQ - D D K E V C K I I N K T F A D I R D I I G G T D Y W N D L S N R K L V G K I N EBP2.SEQ - DE N A L C S I I Q N S Y A D L A D I I K G S D I I K D Y Y G K K M E E N L N EBP3.SEQ - G G D K I C N A I L G S Y A D I G D I V R G L D V W R D I N T N K L S E K F Q EBP4.SEQ Y L D E R A C K Y L N Y S F D D Y K N I I L G K D M W R D P N S I K T E N I L K EBP5.SEQ L D N Q N A C K Y I N D S Y V D Y K D I V I G N D L W N D N N S I K V Q N N L N
                                                                              YWNDLSNRKLVGKIN 1717
                                                                                                                      1711
                                                                                                                      1399
                                                                                                                      763
                                                                   IGNDLWNDNNSIKVQNNLN 1651
Majority KIFEXNXGXRNKQ
                                                                      - S L K E F R N K W W D X N K N X V
                                   650
                                                             660
                                                                                       670
                                                                                                                  680
                                                                      - N D K L F R D E W W K V I K K D V 1801
EBP1.SEQ TN - - SNYVHRNKQ - -
EBP2.SEQ KV - - NKDKKRNEE - -
EBP1.SEQ TN - SNI V H K N K W E E - - - - - - - S L K I F R E K W W D E N K E N V EBP3.SEQ K I F M G G G N S R K K Q - - - - - - N D N N B R N K W W E K Q R N L I EBP4.SEQ G N F E - - G I K A N I V S M Y P S Y A D L S L D E F R K H W W D Q N K K Q L
                                                                                                                      1489
                                                                         - IKELKNVWWILNRNKV 1756
EBP5.SEQ LIFERNFGYKVGRNKLFKT - -
Majority WEVMSCVI - - - - KXKKTCKRXDDFENIPQFLRWFSEWGDD
690 700 710 720

EBP1.SEQ WNVISWVF - - - - KDKTVCKE - DDIENIPQFFRWFSEWGDD 1906

EBP2.SEQ WKVMSAVL - - - - KNKETCKDYDKFOKIPQFLRWFKEWGDD 1903

EBP3.SEQ WSSMVKHI - - - PKGKTCKRHNNFEKIPQFLRWLKEWGDE 1597

EBP4.SEQ WEAISCEFYKGNHT-GVCLMEDDNDN--QYLHWFREWKND 985

EBP5.SEQ WESMRCGIDEVDQRRKTCERIDBLENMPQFFRWFSQWAHF 1876
                                                                                                                      1906
                                                                                                                      1597
Majority FCEDKX - - - - - KEICXXEKXKVECKXKNCSD - - XXCKNK
                                   730
                                                             740
                                                                                        750
                                                                                                                  760
1993
                                                                                                                       1999
                                                                                                                       1684
                                                                                                                      1105
Majority CSSYKKWIXXKKXEYEKQSKKYDKDKKLFNNY - - Y - EFKD
                                   770
                                                              780
                                                                                                                  800
EBP1.SEQ CNSYKEWISKKKEEYNKQAKQYQEYQK-GNNYKMYSEFKS 2110
EBP2.SEQ CSEYKKWIDLKKSEYEKQVDKYTKDKN-KKMYDNIDEVKN 2116
EBP3.SEQ CSSYEKWIKERKNEYNLQSKKFDSDKKLNKKNNLYNKFED 1804
EBP4.SEQ CTDYDKWIINKRKEYKMQSSKYKRDRSLFNNV----IQN 1210
EBP5.SEQ CTNMNYWTYTRKLAYEIQSVKYDKDRKLFS-L----AKD 2077
 Majority KKAXVYLKEXSKKCSNINFXDEIFXELPNXYKEXCT - CX -
                                    810
                                                              820
                                                                                        830
 - 2233
                                                                                                                       1912
             LKPWEYL-
 EBPS. SEQ KNVTTFLKENAKNCSNIDFT - KI FD QLD K L FKERCS
```

Fig. 2C

190

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Majority DTQXL----
                                                                             - A - K - - - T E - Y - X I X E
                                                               860
                                                                                          870
EBP1.SEQ EVKDVPI-----SIIRNNEQTSQEAVPEBSTEIA-HRTE 2326
EBP3.SEQ N - - - - - - - - - - - P S S S KALKP I KTN V F - PI B E 1972
EBP4.SEQ D T Q T F V Y P Y K G - - - - - - - - - - - - - - Y E D I C K 1315
                                                                                                                         2248
EBP5. SEQ DTQVLEVKNKEMLSIDSNSEDATDISEKNGEEELYVNHNS 2308
Majority SXVXEXXXEXXKSKDXKNPX - - G - - G - - -
                                                               900
                                                                                          910
Majority X - - - -
                                       ----DXLXVQEFGVNHXXPKE--XTLGXSD
EBP1.SEQ S - - - - - - - - E D E V T Q E F G V N H G I P K G E D Q T L G K S D 2527
EBP2.SEQ H - - - - - - - - - D I Y D I D T F S - - - - - - - - D T F G D G T 2326
EBP3.SEQ R - - - - - - - - - D - - - - - - D V H H D G P K - - E V K S G E K 2119
EBP4.SEQ - - - - - - - - - - - S L N V N P L S L T S Q D V T E - - R V S S V D 1438
EBP5.SEQ N K G K D T A T D T K N S P E N L K V Q B H G T N G E T I K E E P P K L P E S S 2548
                                                     PKIGEXXK - - XEXEXXRXXE - E - K -
                                                               980
                                                                                          990
Majority - XXXXXEEPE-E--XEXXEXIKDXSSSPLXSS---
                                   1010
                                                              1020
                                                                                         1030
EBP1.SEQ A L S T S V D E P E L S D T L Q L H E D T K E N D K L P L E S S - - - T I T S P 2719
EBP2.SEQ - I N A N I N E - - - - - - - Q Q S G K D T - - - - - - - - - 2377
EBP3.SEQ - - - - - - - - - - I E G K E K S K G D H S S P V H S K - - D I - - 2242
EBP4.SEQ S G A N G R E D P S T E S S T Y N D G V I T - - S S S L G S S S G R D V S S - 1663
EBP5.SEQ E Q E Q K Q E Q E E B E Q K Q E E E B Q Q I Q D Q S Q S G L D Q S S K V G V A S E 2788
Majority - N X G S S G T E Q X V V S S E - E K - P E E K X X D X D S X S D T S I S S E X
                                   1050
                                                              1060
Majority GXESSDADXAXDVXSLSGDKDXSRXRSIIXSXXEXXXNVL
                                   1090
                                                              1100
                                                                                          1110
                                                                                                                    1120
EBP1.SEQ S R P E TD A K D T S N L L K L K G D V D I S M P K A V I G S S P N D N I N V T 2959
EBP2.SEQ - P B S D A - A I N V B K L S G D E S S E T R G I L D - - - - - - - - - - 2503
EBP3.SEQ G Q S S N S S D N D P A V V S G R B S K D V N L H T S - - E R I K E N E E G V I 2461
EBP4.SEQ G K B S S Q E Q H N L D G S S L S R H S N Q D E E R S I I T S D V B H G T N S L 1888
EBP5.SEQ P N E N S V V D R A T D S M N L D P E K V H N E N M S D P N T N T E P D A - S L 3025
```

```
Majority K X D X X X X I N X K X L X S D V - - I X X N H E D V X X X P N E X D T V X N
                                          1130
                                                                         1140
                                                                                                          1150
                                                                                                                                         1160
EBP1.SEQ B Q G D N I S G V N S K PL S D D V - R P D K N H E E V K E H T S N S D N V Q Q 3076
EBP2.SEQ - - - - - - - - I N D P S V T N N V - - - - - - N E V H D A S N T Q G S V S N 2578
EBP3.SEQ K T D E S S K S I E I S K I P S D - - - Q N N H S D L S Q N A N E D S N Q G N 2569
EBP4.SEQ F G S Q I Q D Q E T - - - - - - - - - - I L G E S E P L T T S F P E H E T S K M 1978
EBP5.SEQ K D D K K E V D D A K K E L Q S T V S R I E S N E Q D V Q S T P P E - D T P T V 3142
Majority XGXIGNK-XEKXLKXAXXNSSSSXDXG-KXXXETXE-
                                                                                                   1190
                                          1170
                                                                          1180
EBP1. SEQ SGGIVNM N VEKELKOTLENPSSSLDEG-KAHEELSEPNLS 3193
EBP2.SEQ T S D I TN - - -
EBP2.SEQ T S D I T N - - - - - 2596
EBP3.SEQ K E T I N P P S T E K N L K E I H Y K T S D S D D H G S K I K S E I E P K E L T 2689
EBP4.SEQ D T H A G G K - N M E Q V R N A S V D S S S E M S N G G R G G L K T K E - - M K 2089
EBP5.SEQ E G K V G D K A E M L T S P H A T D N S E S E S G L N P T D D I K T T D G V V K 3262
Majority EEEXLGXXESXLXXTXXNLEESIX-XSXXEQSENXGSXTX
                                          1210
                                                                          1220
                                                                                                          1230
                                                                                                                                         1240
EBP1. SEQ S D Q D M S N T P G P L D N T S E E T T E R I S - N N E Y K V N E R E G E R T L 3310
EBP1.SEQ S D Q D M S N I P G P D D N I S B S I I B N I S - N N E I N V N B N S G D K I D S S H 2698
EBP2.SEQ - - - - - G H S E S S L N R T T N A Q D I K I G - R S G N E Q S D N Q E N S S H 2698
EBP3.SEQ E E S P L T D K K T E S A A I G D K N H E S V K - S A D I F Q S E I H N S D N R 2806
EBP4.SEQ G E E V T G - - - I T S K N D I N L E D S T - V H S R Q N K I E N S G D N T Q 2194
EBP5.SEQ E Q E I L G G G E S A T E T S K S N L B K P K D V E P S H E I S E P V L S G T T 3382
Majority GKEXSESLXXXSXXSEXXTXPXYDDNXD-X-T---SED-
                                          1250
                                                                          1260
EBP1.SEQ TKEYEDIVLKSHMNRESDDGELYDENSD-LSTVNDESEDA 3427
EBP2.SEQ S S D N S G S L T I G Q V P S E D N T Q N T Y D S Q - - - - - - - - - - - - 2776
EBP3.SEQ D R I V S E S V V Q D S S G S S M S T E S I R T D N K D - F K T - - - S E D I 2911
EBP4.SEQ G K E H I N V L Q G M - - - D K H L E N P P T S E R G D S V - - - - - - - - 2275
EBP5.SEQ G K E E S E L L K S K S I E T K G E T D P R S N D Q E D A T D D V V E N S R D D 3502
Majority -- S -- G - X X S E - S -
                                                                                         ---IXSXPHDNXRIXTT
                                          1290
                                                                                                          1310
                                                                                                                                         1320
EBP1.SEQ E A K M K G N D T S E M S H - - - - - - N S S Q H I E S D Q Q K N D M K T V G 3526
EBP2.SEQ - - - - - - - - - - - - - - - - - - N P H R D T P N A L A 2809
EBP3.SEQ A P S I N G H E K - - - - - - - - - - - - - - - - - T S H T H D N N R I E T T 2344
EBP5.SEQ N N S L S N S V D N Q S N V L N R E D P I A S E T E V V S E P E D S S R I I T T 3622
Majority X L G S - - - -
                                         -- D D K - N E - - -
EBP1.SEQ D L G T - - - - - T H V Q N E - - - - - EBP2.SEQ S L P S - - - - - D D K I N E - - - - - EBP3.SEQ - - G S - - - - - E D K - - EBP4.SEQ A - - - - -
                                                                         - SIIDKD
                                                                                                                                               2347
EBP5.SEQ E V PSTTV K P PDEKR SEE V G E K E A K E I K V E P V V P R A I G E P M 3742
                                                                                                     - SH TDIXXINXEG
Majority EENFXXSSXSNVHD - -
                                          1370
                                                                                                          1390
                                                                                                                                          1400
EBP1.SEQ DEKLRESKESKIHKABEERL----
                                                                                            --- SHTDIHKINPED 3679
EBP5.SEQ ENSVSVQSPPNVEDVEKETLISENNGLHNDTHRGNISEKD 3862
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Majority RXDXTLLTXDXRXT-LE---RNG--NI-SESDVX-HXFHX
                        1410
                                           1420
                                                              1430
                                                                                1440
EBP5.SEQ LIDIHLLRNBAGSTILDDSRRNGEMTEGSBSDVGBLQEHN 3982
Majority X S N X X G D E X X - - - I - - - - - G - I Q - - X - - - B E S G N V L N M
                        1450
                                           1460
                                                              1470
                                                                                 1480
EBP1.SEQ M N N L H G D G V S E R S Q I N H S H H G N R Q D R G - - - G N S G N V L N M 3907
EBP5.SEQ FSTQQKDEKDFDQIASDREKBEIQKLLNIGHEEDEDVLKM 4102
Majority X R N - - S X X D N P N S X N Y - - - D - K - N I E E Y N N R D X S K V R E L
                                           1500
                        1490
                                                              1510
                                                                                 1520
EBP1.SEQ R S N N N N F N N I P S R Y N L - - - Y D K K L D L D L Y E N R N D S T T K E E 4018
EBP2.SEQ - - - - - - Y K D N P K R S N F S S E N D H K K N I Q E Y N S R D T K R V R E B 3169
EBP3.SEQ K P N K S S - - - - - - - - - - - - - - - - P V T S F D H V D S P N I S E L 3208
EBP4.SEQ P R - - - N V L N N K N S R T Y - - - - - - - N I E E Y I Y R D V N K V A D D 2623
EBP5.SEQ D R T E D S M S D G V N S H L Y Y N N L S S E E K M E Q Y N N R D A S K D R E E 4222
Majority. IXKLSKXNKCXNEXSXKYCXYMXXEX-LLXTCSXEKRKXL
                        1530
EBP1.SEQ IKK LAEIN K CENEISVKY CD HMIHEEI PLKT CT KE KT R NL 4138
EBP2.SEQ LIKLSKQNKCNNEYSMEYCTYSDERNSSPGPCSREERKKL 3289
                                                                                     3208
EBP3.SEQ
EBP4.SEQ I M R S YKSN R C T N N L S S N Y C S K L K K E S - L S N T C T N E D S K R L 2740
EBP5.SEQ I L N R S N T N T C S N E H S L K Y C Q Y M E R N K D L L B T C S E D K R L H L 4342
Majority CCXISDYCLKFFNFXSIEYYNCTKKEFDSPXYKCFRGEGF
                                            1580
                                                              1590
                         1570
EBPS.SEQ C C E I S D Y C L K F F N P K S I E Y F D C T Q K E F D D P T Y N C F R K Q R F
                                                                                     4462
Majority S S M F X - - - - - - - -
                         1610
                                                                                     . 4261
EBP1.SEQ - - - F S
EBP2.SEQ S S M F H I
                                                                                     3427
EBP3.SEQ S S M F N L D K K K K K K K K K K G
                                                                                     3256
                                                                                     2914
EBP5.SEQ TS MS CY - - - - KIKNNIH
                                                                                     4501
```

Decoration 'Decoration #1': Box residues that match the Consensus exactly.

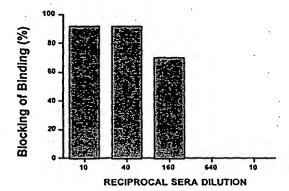


Fig. 3